

REMARKS/ARGUMENTS

Claims 40-80 are currently pending. Claims 44-47, 49-57, and 62-64 are withdrawn from consideration as non-elected subject matter. Claims 48, 50, 56, 59, 60, 66, and 67 have been amended to further refine and clarify that which Applicant considers to be the invention. Claims 41, 58, and 78-80 are cancelled. No new matter has been added by these amendments.

Discussion of Claim Objections

The Examiner objected to claim 71 because the claim did not begin with the letter "A." Claim 71 was amended to address this typographical error and Applicants respectfully request that the claim objection be withdrawn as moot, in view of Applicant's amended claim.

Discussion of Rejections under 35 U.S.C. §112, second paragraph

The Examiner maintained the rejections of claims 48, 60, 61, 67, 68, 70 and 80 under 35 U.S.C. §112, second paragraph, for failing to point out and distinctly claim Applicant's invention. The Examiner alleges that while the cell culture attachment reagent known as RGDS, a tetrapeptide consisting of Arginine-Glycine-Aspartic acid-Serine, was well known in the art, nowhere in the specification is it specified that RGDS is the RGDS peptide. Applicant respectfully submits that the term "RGDS" would have been understood by one of ordinary skill in the cell culture arts, at the time the invention was made, to mean the Arginine-Glycine-Aspartic acid-Serine *peptide*, because of the context of the specification where the abbreviation appears. At paragraphs [0021], [0025], [0027] and [0031] of Applicant's specification, the term appears after the phrase "The biopolymer of the present invention can be embedded with, or incorporated into its composition during synthesis, *attachment* or growth promoting *factors* (or elsewhere "reagents") comprising one or more of the following..." (emphasis added). Thus, one of ordinary skill in the art would have known that RGDS in that list meant the RGDS *peptide* that

is known to those of ordinary skill as an attachment factor, and not some other meaning.

The Examiner also states that because it is a peptide of four amino acids in length, the sequence rules dictate that it must have a sequence listing, even though this reagent has been present in other issued patents without having a sequence listing. In order to further prosecution, Applicant submits with this reply, a new Sequence Listing and statement under 37 C.F.R. §1.821, identifying the tetrapeptide named RGDS as SEQ ID NO: 1. In addition, Applicant has amended claims 48, 50, 56, 60 and 67 to recite (SEQ ID NO: 1) when RGDS is referred to in the claims. In view of the foregoing, Applicant requests withdrawal of this rejection.

The Examiner has rejected claims 60, 61, 67, and 68 as indefinite because the Markush language does not clearly define the alternative reagents. Applicant has amended the claims into a more suitable Markush format. In view of the foregoing, Applicant requests withdrawal of this rejection.

The Examiner rejected claim 70 as indefinite because the recited species of “slides” did not appear to correlate with claim 69, as slides do not have an inside and outside surface. Applicants respectfully disagree.

As Applicant stated in the previous Reply, claim 69 states that “...wherein the inside surface is the surface in contact with cells and cellular media and the inside surface of said apparatus is coated with a film of Diamond-like-Carbon.” While not wishing to be bound to any particular embodiment, Applicant submits that one of ordinary skill in the art would understand that a slide for growing cells can comprise an inner surface where the cells are grown, and can also comprise a chamber which can be surrounded by walls in which a quantity of growth media can be contained on top of the cells growing on the inside surface in the chamber. There may also be a cover that sits on top the cell chamber. Alternatively, the slide can be a removable glass, or plastic insert, which is placed in a dish. In either embodiment, the “inside surface” of the slide would be understood by those of ordinary skill to be the side that the cells are growing on, and the outside would be the surfaces the cells are not growing on. For the Examiner’s convenience, Applicant has supplied a copy of a cell

culture catalog from two different suppliers. Each page shows a cell culture slide that has an inside, or well, where the cells and media would be placed, and an outside, being the outside surfaces of the slide. Applicant therefore respectfully request withdrawal of this rejection.

The Examiner has rejected claim 80 as indefinite because the Markush language does not clearly define the alternative reagents. Applicant has cancelled this claim, rendering the rejection moot. Applicant requests withdrawal of this rejection.

Discussion of Rejections under 35 U.S.C. §112, second paragraph

The Examiner rejected claims 59-61, and 66-68 as failing to comply with the written description requirement because 59 and 66 recite the term chitosan and/or sodium alginate, but the Examiner alleges that the specification does not teach the combination of the two. In view of Applicant's amendments, Applicant respectfully requests that this rejection be withdrawn as moot.

Discussion of Rejections under 35 U.S.C. §102

The Examiner rejected claim 78, and claims 58, and 78-80 under 35 U.S.C. §102(b) as anticipated over Steffen et al. (Surface and Interface Analysis, 2000), and Woo et al. (WO 01/43790) respectfully.

Applicant has cancelled claims 58 and 78-80, rendering the rejection moot.

Discussion of Rejections under 35 U.S.C. §103

The Examiner has rejected claims 40, 42, 43, and 78, under 35 U.S.C. §103(a), as obvious over Ignatius et al., in view of Lu et al. According to the Examiner, Ignatius et al. teaches the coating of glass coverslips with Diamond-like-Carbon and laminin to support growth and attachment of neuronal cells. However, Ignatius et al. do not teach the use of polymers to grow cells on. Lu et al. is provided by the Examiner to teach that cells are routinely grown on plastic surfaces, including polycarbonate, polyethylene, and polyurethane, and that such surfaces can be coated

with Diamond-like-Carbon. Thus, the Examiner argues that it would have been obvious, to one of ordinary skill in the art, at the time Applicant's invention was made, to substitute the synthetic biopolymers taught in Lu et al., for the glass coverslips taught in Ignatius et al. to arrive at Applicant's claimed invention. Applicant respectfully disagrees.

In the interest of furthering prosecution and without acquiescence to any of the Examiner's rejections, Applicant has cancelled claim 40 and amended claim 41 to incorporate all the features of claim 40. Applicant has also cancelled claim 58 and amended claim 59 to incorporate all the features of claim 58. Applicant submits that in view of Applicant's claim amendments and the Examiner's statements in the present Office Action regarding the allowability of claims 41, 48, 60, 61, 67-68 and 70, Applicant respectfully requests withdrawal of this rejection.

Conclusion

Applicant respectfully submits that the patent application is now in condition for examination and allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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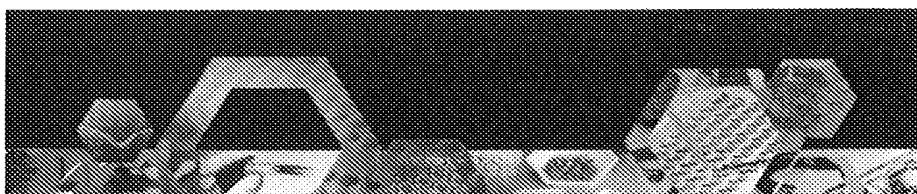
(202) 737-6770 (telephone)

(202) 737-6776 (facsimile)

Date: November 30, 2010

JGC/jj
H:\Joe\Cellular Bioengineering\266622\266622 Response to OA2.doc

ISO Certified 9001:2000 & 13485:2003


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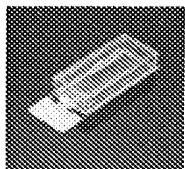
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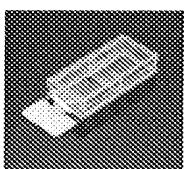
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BD Falcon™ Culture Slides

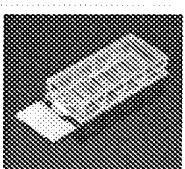
- Sterile by gamma irradiation
- Culture Slides allow you to culture cells and then analyze them on a glass slide. Cells are grown in a plastic chamber affixed to a specially prepared glass microscope slide
- Plastic chamber adhesive seal remains with the media wells, not the glass slide
- Cells can be fixed and stained in place without disruption of the cell monolayer
- Media chamber is easily removed for slide analysis with the supplied removal tool and key
- Blue hydrophobic border defines cell culture areas


BD Falcon™ 1-well CultureSlide
 Cat. # DL-354101

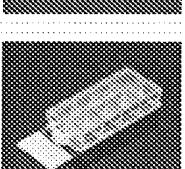
\$633.13 0

BD Falcon™ 1-well CultureSlide, glass slide with polystyrene vessel, lid, and safety removal tool
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BD Falcon™ 2-well CultureSlide
 Cat. # DL-354102

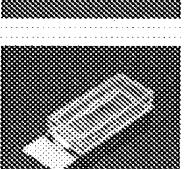
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BD Falcon™ 2-well CultureSlide, glass slide with polystyrene vessel, lid, and safety removal tool
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BD Falcon™ 4-well CultureSlide
 Cat. # DL-354104

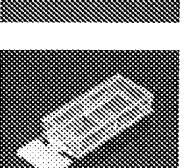
\$652.13 0

BD Falcon™ 4-well CultureSlide, glass slide with polystyrene vessel, lid, and safety removal tool
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BD Falcon™ 8-well CultureSlide
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\$678.11 0

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BD Falcon™ 1-well CultureSlide
 Cat. # DL-354111

\$175.05 0

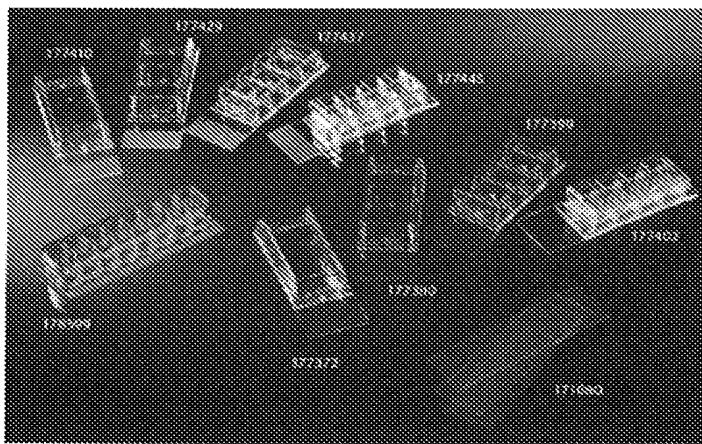
BD Falcon™ 1-well CultureSlide, glass slide with polystyrene vessel, lid, and safety removal tool
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BD Falcon™ 2-well CultureSlide
 Cat. # DL-354112

\$181.53 0

BD Falcon™ 2-well CultureSlide, glass slide with polystyrene vessel, lid, and safety removal tool
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BD Falcon™ 4-well CultureSlide

Lab-Tek™
Chamber Slide™ System

- Cells grow on a standard microscope slide
- No cell transfer needed prior to visualisation/staining
- Upper structure can be removed when culturing is complete
- Useful for viral and mycoplasma testing, chromosome studies, toxicity tests and immunocytoLOGY
- Broad range of formats and well numbers
- Fits standard equipment
- Saves time and reagents
- Suitable for use with fluorescent labels
- CE marked

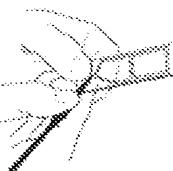


Media Chamber and Gasket Removal

Fix and stain. Gasket may be used as reservoir for reagent incubation. To detach slide from media chamber, grip end of slide with one hand. Gently squeeze both ends of media chamber toward the center lifting chamber as gasket extrudes.



Gasket removal. Insert tip of a thin bladed spatula in smaller slot under gasket at one corner. While stretching or tearing the gasket, smoothly lift it away from the slide.



Details

Lab-Tek™ Chamber Slides

CE marked. Sterile

| Cat. No. | 177372 | 177410 | 177380 | 177429 |
|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| No. of wells | 1 | 1 | 2 | 2 |
| Slide material | Glass | Permanox™ | Glass | Permanox™ |
| Suggested working volume, ml | 2.5 - 4.5 | 2.5 - 4.5 | 1.2 - 2.0 | 1.2 - 2.0 |
| Culture Area, cm²/Well | 9.4 | 9.4 | 4.2 | 4.2 |
| Units per pack/carton/case | 8/16/96 | 8/16/96 | 8/16/96 | 8/16/96 |
| Availability | Worldwide | Worldwide | Worldwide | Worldwide |
| Buy Online | Add to Cart |

Lab-Tek™ Chamber Slides

CE marked. Sterile

| Cat. No. | 177399 | 177437 | 177402 | 177445 | 178599 |
|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| No. of wells | 4 | 4 | 8 | 8 | 16 |
| Slide material | Glass | Permanox™ | Glass | Permanox™ | Glass |
| Suggested working volume, ml | 0.5 - 0.9 | 0.5 - 0.9 | 0.2 - 0.4 | 0.2 - 0.4 | 0.1 - 0.2 |
| Culture Area, cm²/Well | 1.8 | 1.8 | 0.8 | 0.8 | 0.4 |
| Units per pack/carton/case | 8/16/96 | 8/16/96 | 8/16/96 | 8/16/96 | 8/16/96 |
| Availability | Worldwide | Worldwide | Worldwide | Worldwide | Worldwide |
| Buy Online | Add to Cart |

Accessories